

**Amendments to the Abstract:**

Replace the Abstract with the following:

**ABSTRACT**

A system is provided that includes a memory 204 comprising a baseline topology 216; and a processor 208 that selects, from the baseline topology 216, first and second addresses associated with first and second routers 224 and 228, respectively, wherein the first router 224 has an associated first hop count relative to a selected node 200 and the second router 228 an associated higher second hop count relative to the selected node 200, transmit test packets having a time to live equal to or greater than the first hop count, receive responses associated with the test packets, and determine, based on the response, whether load balancing is in effect at the first router 224.